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OBJECTIVE

Seeking a Lead Sr. Embedded/Software Engineer position with Architecture/Design responsibilities or a System Engineer position in an Electrical/Electronic based Project.

Summary

Widely skilled senior engineer with basic formation in computer hardware and digital logic, 20+ years of experience developing products based in IT technology, including two years participating of a medium team in a large project and another year in a large team designing and implementing a very large full life cycle project. Extensive knowledge of Embedded Software and Hardware, C/C++, Windows/Win32 and UNIX/Linux. Very diverse skill set, including UML, Design Patterns, CORBA, XML, PKI cryptography, MS-SQL, ORACLE, MySQL, BSD sockets and Multi-thread programming using POSIX(UNIX) lib. Proven ability to apply expertise in existing and new technologies creatively to find innovative solutions, and to work independently or in teams.

- ARM Accredited Engineer (Certified by ARM on December 2014)
- Researched, Designed and implemented an Encrypted Network Transport mechanism based on "OpenSSL" library. This system now is being used by "FACTS" (Florida Academic Counseling and Tracking for Students) to protect online transactions.
- Designed and implemented the Saflink E-Trust Mechanism codename "CodeSign" (full released in April 2001)
- Designed and implemented the Saflink Speaker Verification Device (beta released in December 2000)
- Developer of award-winning financial system in Java 3 tiers (Multi-platform), used by Hewlett Packard of Brazil (released in 1999)
- C (25 years), C++ (20 years), Java (4 years), Python (10 years), TCL (1 year)
- Windows (20 years), Win32 (6 years) - User, GDI, and Kernel, COM (3 years)
- Unix/Linux (20 years)
- MS-SQL (3 years), Oracle 7.3 (2 years), Oracle (4 years), MySQL (5 years)
- Servlets (2 years), JSP (2 years)
- JDBC(4 years), CORBA (4 years), UML (15 years)
- XML (3 years), HTML (6 years)
- BSD Sockets (5 years), OpenSSL (2 years)
- Digital Certificates, Encryption, PKI (3 years)
- Clearcase (10 years), CVS (1 year), Subversion(5 years)
- Rational Rose (8 years), Rhapsody (4 years), Enterprise Architect (1 year)
- DOORS(3 years), Integrity (1 year)
- Tri-lingual: Portuguese, English and Spanish

Experience

AMD, Orlando, FL - USA

April 2016 - Present

MTS Silicon Design Engineer

- Developed and implemented new virtualization firmware for GPU (graphics) SRIOV.
- Designed new features for next generations of SRIOV firmware.
- Debugged and fixed issues during integration with SRIOV drivers in Windows 7/10 and Linux.
- Mentored and trained a group of about 10 engineers to become capable of working in SRIOV firmware development environment.
- Invented and published a patent for “GPU hang detection in virtualized environments”

Presidio, Orlando, FL - USA

January 2016 - April 2016

Sr. Embedded Engineer

- Implemented new features into an existent embedded device to remotely track vehicles using GPS and GSM technologies (used by Orange county Law Enforcement Officers).
- Created an OTA (Over the air) firmware update mechanism for the tracker.
- Re-worked an existent bootloader so it could update firmware without downtime (firmware hot swap).
- Debugged and fixed instabilities on the field and updated new firmware.

Jabil, St. Petersburg, FL - USA

June 2015 - January 2016

Sr. System/Software Architect (contractor)

- Designed a medical device (Hemodialysis) at the architecture level using UML Iconix methodology.
- Created and traced software requirements from costumer requirements in PTC Integrity.
- Reversed engineered Embedded Python scripts in the lab to fine tune theory of operation.
- Designed Use Cases, Class Diagrams and Sequence Diagrams in EA (Enterprise Architect) to express system architecture.

AMD, Orlando, FL - USA

January 2012 - May 2015

Sr. Embedded/Software Engineer (contractor / perm)

- Developed Performance Counters Linux 64 bits device driver for ARM 57 for profiling user space apps.
- Developed C++ and assembly test applications to validate new ASICs low level functionality.
- Used SystemVerilog to verify ASIC IP block functionality
- Designed and implemented a debug state machine C++ library to validate ASIC functionality.

LiveTV/JetBlue, Melbourne, FL - USA

March 2008 - December 2011

Sr. Embedded/Software Engineer

- Implemented ARINC 429 and ARINC 717 Aircraft Data Server (EMI test for GE CEI-420 board).
- Ported uClinux for Coldfire (MCF5282), tested and validated a cross-compiled toolchain for it.
- Ported and customized bootloader (u-boot) for the Coldfire microcontroller.
- Wrote several OO C++ subsystems for the embedded target.

Boeing , Everett, WA - USA

July 2006 - February 2008

Sr. Software Engineer (contractor)

- Implemented subsystems at the ICD level for the 787 aircraft.
- implemented ARINC 429 and ARINC 664 interfaces to deal with communications between subsystems
- Wrote tools for auxiliary tasks using C++, python, TCL.
- Wrote several TCL scripts for SLATE and Versant OO Database
- Used CVS & Subversion as versioning Control.
- Followed Boeing process to achieve CMMI level 3

Motorola , Ft. Lauderdale, FL - USA July 2004 - July 2006

C/C++ Lead Sr. Software Engineer (contractor)

- Lead a group of 6 C++ developers and mentored them thru the project's lifetime
- performed maintenance and improvements in a multi-threaded client-server remote control software for mobile devices.
- Wrote tools for auxiliary tasks using C++, python, MySQL.
- Wrote VB6 GUIs and interface it with C++ DLLs
- Wrote Windows CE Smartphone Applications.
- Designed Core Components using UML & Rational Rose
- Used ClearCase & Clearquest as Software Change Management & Versioning Control.

Beckman & Coulter, Miami, FL - USA July 2003 - May 2004

C++ Sr. Software Engineer (contractor)

- Designed and developed an Instrument Simulator (Automated Complete Blood Count), using C++ Object Oriented.
- Designed Core Components using UML & Rational Rose
- Followed and applied Procedures according to ISO 9001 and GMP
- Used ClearCase & Clearquest as Software Change Management & Versioning Control.

Intarsys Inc., Miami, FL - USA March 2002 - April 2003

C++ / Java Sr. Software Engineer

- Wrote a network communication security layer in C++ fully based on OpenSSL library to be used by "FACTS" organization (Florida Academic Counseling and Tracking for Students).
- Developed a Java web-application for validating Documents applying Regular Expressions, as well parsers to convert them.
- Wrote a full life cycle application for players registration automation at "FYSA" (Florida Youth Soccer Association) using C++ (Borland Builder C++ 6.0).

Saflink Corporation, Redmond, WA - USA May 2000 - June 2001

C++ / Java Software Engineer

- Developed ANSI standard C++ (OOP) core components for biometric and security applications.
- Developed Java Applications and Applets to interface to the core components.
- Contributed in a fully ANSI C++ standard core components which has strong functionalities about Users, User Managers, Object Persistence, Cryptographic Manager, Biometric Services Providers Manager. I also had developed a Java applet to run under Netscape and accessing our core components wrapped in a dll (using JNI).
- Created a full life cycle project, architecture design (UML) implementation and deployment of Saflink Speaker Verification®, which is a HA-API compliant device for voice recognition using C++ (Visual C++ 6).
- Developed a E-Trust mechanism for module's authenticity verification between
- Client-server applications based in Digital Certificates and PKI cryptography

Disoft Sistemas, Sao Paulo - Brazil 1999

Java Software Developer (contractor)

- Java Programmer and architect of WebLeasing, a 3 tiers system, to run leasing deals for Nation-wide companies (intranet/internet) (VB-Active-X, Corba, Java, JDBC, Oracle 8). Applied UML using Rational Rose to works like a link between Business Analysts and programming as well documenting all the code.
- Contributed to development of several modules that represented big importances in critical phases of the project.

Softtrade, Sao Paulo - Brazil 1998

Java Programmer Analyst (contractor)

- Wrote significant amount of Stored Procedures using Java-JDBC for the UDB-5 DB-2, MS-SQL and Oracle databases, which performed routines in a human-resources client-server software.

Politecnica Paulista, Sao Paulo - Brazil 1996 - 1998

C/C++ Programmer Analyst

- Designed and developed software solutions for commercial integration, like Stock control, Customer databases, Point of Sale, etc.
- Most of them fully object oriented using Borland C++ and Borland Builder C++.

Autonomous Developer, Santos - Brazil 1990 - 1996

C/C++ Software Developer

- Autonomous programmer licensed by the Brazilian government, developed solutions for the small business using c (Borland Turbo C++) and internet solutions for an ISP (<http://www.coastalway.com.br>).

Fortec Technical School, Sao Vicente - Brazil 1987 - 1990

Technical Teacher

- Permanent teacher of an accredited technical school, in the fields of: Digital Logic, Fundaments of Digital Circuitry, Binary Logic and Implementation.

Education

“Treinasse” Technical School, Santos - Brazil

Associate Degree: Electronic Technician - Computer Hardware and Microprocessors

Relevant courses in compiler design, Computer Architecture, and principles of software development. Learned and used C, Perl, and Basic mainly on Windows systems and in Unix

Patents

- US20190018699A1 (United States) Publication date: 2019/01/17 – “Hang detection for virtualized accelerated processing device”

Affiliations

Software Engineer member, "IEEE", Institute of Electronic and Electrical Engineers, Piscataway, NJ, 2000

Member # 41380325

Relevant Interests

Interest in new technologies keeps me spending extra time investigating new products and techniques. For example, current projects includes, new voice/image compression algorithms to speed up network transport, Smart Object Distribution Bus, aiming to bring down to tolerance 0 any network failure.

PROFESSIONAL REFERENCES

Fully available upon request